



PATENT COOPERATION TREATY

PCT

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 76843 Jen/cor		FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA416)
International application No. PCT/DK03/00133	International filing date (day/month/year) 04.03.2003	Priority date (day/month/year) 04.03.2002
International Patent Classification (IPC) or both national classification and IPC B29D31/50		
Applicant ECCO SKO AS et al.		
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 2 sheets.</p>		
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the opinion</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>		
Date of submission of the demand 26.09.2003		Date of completion of this report 19.11.2003
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized Officer Dupuis, J-L Telephone No. +49 89 2399-2908 

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International application No. PCT/DK03/00133

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1, 3-15	as originally filed
2	received on 26.09.2003 with letter of 26.09.2003

Claims, Numbers

2-16	as originally filed
1	received on 26.09.2003 with letter of 26.09.2003

Drawings, Sheets

1/5-5/5	as originally filed
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2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-16
	No: Claims	
Inventive step (IS)	Yes: Claims	1-16
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-16
	No: Claims	

2. Citations and explanations

see separate sheet

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Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Independent method claim 1:

The subject-matter of claim 1 recites a method according to the preamble of claim 1 for moulding soles of plastic material.

The closest prior art is considered to be represented by GB-A-840,029.

The subject-matter of claim 1 is distinguished therefrom by providing an annular welt having an inner outline substantially corresponding to the outer outline of the lower side section of the shoe upper which corresponds to the position of the welt on the finished shoe, such that the portion of the welt facing the shoe upper is tilted inwards and downwards to bring the inner end face of the welt into sealing engagement with the lower side section of the shoe upper.

These distinguishing features enable letting the welt being visible on the finished shoe.

None of the cited references discloses nor renders obvious such feature.

Dependent claims 2- 9:

Claims 2-9 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

Product claim 10:

For the same reasons product claim 10 is considered to be novel and to imply an inventive step since it discloses an undercut portion in the annular welt essential for performing the method of claim 1.

Dependent claims 11, 12:

Claims 11, 12 are dependent on claim 10 and as such also meet the requirements of

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the PCT with respect to novelty and inventive step.

Independent mould apparatus claim 13:

For the same reasons as those stated in respect of claim 1, the mould according to claim 13 is especially designed for performing the method of claim 1 and as such meets also the requirements of novelty and inventive step.

Dependent claims 14-16:

Claims 14-16 are dependent on claim 13 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

GB 840.029 discloses a method of the above type of simultaneous moulding of a welt and a sole onto a shoe upper. In this method a two-part welt is used, each welt half substantially corresponding to half of the welt on the finished shoe. In the open mould position, one half of the welt is inserted into a groove in the inner surface of each upper mould member. Adjacent the groove, each of the upper mould members is provided with a protection to support the welt during the moulding process. The mould halves are then closed around the shoe upper arranged on a last, whereby the welts are made to abut the lower face of the shoe upper. Moulding material is subsequently poured into the cavity formed by the shoe upper and the upper mould member, a piston then being inserted into the cavity and the sole is formed and moulded onto the shoe upper. The use of a two-part welt involves a risk of the sole material flowing in between the welts and the shoe upper at the ends of the welt halves at the heel and toe sections of the shoe. It is furthermore time-consuming to arrange one welt half in each of the halves of the upper mould member.

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Description of the Invention

The object of the invention is to provide a method of the above type allowing for a comparatively simple and reliable fitting of a welt without causing the sole material to flow in between the shoe welt and the shoe upper such that it becomes visible on the finished shoe.

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The method according to the invention is characterised in that:

25 A - an annular welt having an inner outline substantially corresponding to the outer outline of the lower side section of the shoe upper which corresponds to the position of the welt on the finished shoe,

B - the welt is placed in the mould in the open position of the mould,

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Claims

1. A method of moulding soles of a plastic material, eg polyurethane, and shoe
welts on shoe uppers by means of a mould (3) so as to provide the finished shoe with
5 a welted appearance, said mould (3) including a last (2), upon which a shoe upper is
arranged, an upper mould part (5) divided along a longitudinal middle plane and thus
including two halves (5a, 5b) being laterally movable in relation to a lower mould
part (4) between an open and a closed mould position, and a lower mould part (4)
being vertically movable in relation to the upper mould part (5) between an open
10 and a closed mould position, **characterised in that**

A - an annular welt (6) having an inner outline substantially corresponding to the
outer outline of the lower side section of the shoe upper which corresponds to the
position of the welt on the finished shoe,

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B - the welt (6) is placed in the mould in the open position of the mould,

C - the two halves (5a, 5b) of the upper mould part are brought together, whereby
an upper projection (15) on each of the halves extends over the welt (6),

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D - the lower mould part (4) is moved into its closed position, a circumferential
support face (7, 7') on the upper face of the lower mould part (4) co-acting with a
pressure surface (17) on the lower face of the projection (15) on each of the upper
mould part halves (5a, 5b) in such a manner that the portion of the welt (6) facing
25 the shoe upper is tilted inwards and downwards to bring the inner end face of the
welt (6) into sealing engagement with the lower side section of the shoe upper (1)
and

E - the shoe sole is moulded in a manner known *per se* by supplying a plastic mate-
30 rial to the cavity of the mould.